

A New and a Rare Apogonid Species of the Genus *Epigonus* from Japan

Kenji Mochizuki and Kunio Shirakihara

(Received August 4, 1982)

Abstract A new species of *Epigonus* (family Apogonidae), *E. ctenolepis*, is described from two specimens caught from Owase, Japan. This species is distinguishable from other species of the genus in having a compressed body, opercle with a pungent, fully-ossified spine, no eighth rib below tenth vertebra, 10 dorsal soft rays, ctenoid scales on lateral line, 24~25 total gill rakers, etc. *E. atherinoides* (Gilbert) is also described from nine specimens caught on the top of the Komahashi Seamount (ca. 28°06'N, 134°39'E) in the Kyushu-Palau Ridge, northwest Pacific. *E. atherinoides* is distinguished from other species of *Epigonus* in having a wider body (body width greater than or equal to body depth at insertion of pectoral fin), opercle with a fully-ossified spine, no eighth rib below tenth vertebra, 10 dorsal soft rays, cycloid scales on lateral line, etc. A key to the four Japanese species of *Epigonus* is presented.

There are four species of the genus *Epigonus* (family Apogonidae) in the southern waters of Japan. Among the four, two are well-known coastal fishes, i.e., *E. pectinifer* Mayer (Japanese name: yasemutsu) and *E. denticulatus* Dieuzeide (Japanese name: hage-yasemutsu). The third is rare; *E. atherinoides* (Gilbert) (Japanese name: hira-yasemutsu) was very briefly described by Mochizuki (1982), however there are some problems to be discussed on its synonymy. The fourth is a new species which is described in the present paper.

A key to the Japanese species of *Epigonus* is also presented.

Methods

Counting and measuring procedures were done mostly according to Mayer (1974). Body depth and body width were measured at the insertion of the pectoral fin. Counts for vertebrae, predorsal bones and vertical fin rays and examination of the eighth rib below the tenth vertebra were made from X-ray photographs.

Specimens of *E. denticulatus* and *E. pectinifer* which were examined for the key to the Japanese species are listed as comparative materials.

Institution names are abbreviated as follows; FUMT: Department of Fisheries, University Museum, University of Tokyo; USNM: U. S. National Museum of Natural History; MCZ: Museum of Comparative Zoology, Harvard

University; FAKU: Department of Fisheries, Faculty of Agriculture, Kyoto University.

Epigonus ctenolepis sp. nov.

(New Japanese name: Naga-yasemutsu)

(Fig. 1)

Holotype: FUMT-P 1567; 98 mm in standard length (SL), captured by bottom trawl off Owase, Pacific coast of central Japan, on Feb. 10, 1973.

Paratype: FUMT-P 1568; 90 mm SL, female, captured by bottom trawl off Owase, on Mar. 19, 1979.

Diagnosis. This species is distinguished from other members of the genus by the combination of the following characters: dorsal fin VII-I, 10; total gill rakers 24~25; presence of a pungent, fully-ossified opercular spine; absence of eighth rib below tenth vertebra (Fig. 3A); higher body depth (body depth greater than body width at insertion of pectoral fin); upper jaw length 2.4~2.5 in head length; ctenoid scales on lateral line; ca. 12~14 transverse scales below lateral line.

Description. Counts, proportional measurements and other selected characters are given in Table 1.

Body elongate, compressed; its depth greater than its width at insertion of pectoral fin. Anterior profile rising without interruption from snout to origin of first dorsal fin base. Interorbi-

tal space flat. Eye large, oval. Mouth oblique. Maxillary reaching below or slightly beyond anterior margin of pupil. Supramaxillary absent. Opercle with a pungent, fully-ossified spine. Pseudobranchiae well developed. Head scaly except for snout region. Lateral line

extends on caudal fin, with 4 pored scales on it. Eighth rib absent below tenth vertebra (Fig. 3A).

Teeth in upper jaw very small, in irregular double rows. Teeth in lower jaw also very small, in irregular double rows anteriorly, tapering to

Table 1. Comparison of characters in three species of genus *Epigonus*. Means are shown in 3) including urostylar vertebra, 4) measured at insertion of pectoral fin, 5) one specimen,

Characters	<i>E. ctenolepis</i> sp. nov.		<i>E. atherinoides</i>
	holotype FUMT-P 1567	paratype FUMT-P 1568	present specimens
Number of specimens examined	1	1	9
Standard length in mm	98	90	117~159 (129)
Counts			
Dorsal fin rays	VII-I, 10	VII-I, 10	VII-I, 10
Anal fin rays	II, 9	II, 9	II, 9
Pectoral fin rays	18	20	19~23 (20)
Pelvic fin rays	I, 5	I, 5	I, 5
Branched caudal fin rays	8+7	8+7	8+7
Lateral-line scales ¹⁾	49	49	49~52 (51)
Transverse scales ²⁾	4/ca. 14	—/ca. 12	—
Gill rakers (upper+middle+lower)	7+1+17	7+1+16	5+1+13~14 (5+1+14)
Total number of gill rakers	25	24	19~20 (20)
Vertebrae ³⁾	10+15	10+15	10+15
Predorsal bones	3	3	3
Branchiostegals	7	7	7
Measurements in standard length			
Head length	3.2	3.0	3.1~3.3 (3.1)
Body depth ⁴⁾	5.8	6.0	6.8~8.5 (7.6)
Body width ⁴⁾	7.5	8.2	6.4~6.9 (6.7)
Snout to origin of dorsal fin base	2.7	2.7	2.7~2.9 (2.8)
Snout to end of dorsal base	1.5	1.5	1.4~1.5 (1.4)
Snout to origin of anal fin base	1.5	1.6	1.5 (1.5)
Snout to end of anal fin base	1.3	1.4	1.3~1.4 (1.3)
Snout to pectoral insertion	3.2	3.1	3.0~3.1 (3.0)
Snout to pelvic insertion	3.0	2.9	2.8~3.0 (2.8)
Snout to vent	1.8	1.9	1.6~1.7 (1.7)
Measurements in head length			
Snout length	3.9	4.3	3.8~5.0 (4.2)
Orbital diameter	2.1	2.1	2.0~2.2 (2.1)
Upper jaw length	2.4	2.5	2.8~3.2 (2.9)
Interorbital space	3.9	4.3	3.6~4.2 (4.0)
Caudal peduncle depth	3.4	3.8	4.0~4.7 (4.3)
Caudal peduncle length	1.2	1.2	1.2~1.3 (1.3)
Length of second dorsal fin spine	3.9	4.3	5.4~6.7 (5.5)
Length of second anal fin spine	3.9	3.8	4.5~5.7 (5.1)
Length of pelvic fin spine	2.8	3.0	3.2~3.6 (3.4)
Vertical diameter of orbit in its horizontal diameter	1.4	1.3	1.4~1.5 (1.5)
Body width in body depth	1.3	1.4	0.8~1.0 (0.9)
A bony, pungent opercular spine	present	present	present
Eighth rib below tenth vertebra	absent	absent	absent

a somewhat irregular single row posteriorly. Vomer with a small patch of small teeth. Palatines edentulous. Tongue smooth.

Dorsal spines strong compared with other species of *Epigonus*. First spine of first dorsal fin very short; the third longest. Spine of second

dorsal fin short, about half of longest soft ray of second dorsal fin. First spine of anal fin very short; second one shorter than pelvic spine. Caudal deeply forked. Distance between origin of anal fin and vent 2.2~2.4 in distance between vent and insertion of pelvic fin.

parentheses. 1) excluding scales on caudal fin, 2) above lateral line/below lateral line, 6) three specimens, 7) data from MCZ, 8) four specimens, 9) seven specimens.

<i>E. atherinoides</i>			<i>E. occidentalis</i>		
holotype USNM51601	type specimens of <i>E. megalops</i>		holotype ⁷⁾ MCZ28032	other specimens	
1	4		1	9	
92	86~123	(108)	115	75~173	(126)
VII-I, 10	VII-I, 10		VII-I, 10	VII-I, 10	
II, 9	II, 9		II, 9	II, 9	
21	20~21	(21)	19 (right)	19~21	(20)
I, 5	I, 5		I, 5	I, 5	
8+7	8+7		8+7	8+7	
51	48~51	(49)	50	45~50	(47)
4/9	3~4/8~9 (4/9)		—	—/9 ⁸⁾	
6+1+14	6+1+15~16 (6+1+15)		6+17	6~7+1+16~18	(7+1+16)
21	22~23	(22)	23	23~26	(24)
10+15	10+15		10+16	10+15	
3	3		3	3	
7	7		—	7	
3.0	2.7~3.0	(2.8)	3.0	2.6~2.8	(2.7)
7.1	5.6~6.1	(5.9)	7.0	5.6~7.5	(6.4)
6.1	5.3~6.0	(5.6)	6.4	5.2~7.5	(5.9)
2.5	2.5~2.7	(2.6)	—	2.4~2.6	(2.5)
1.4	1.4	(1.4)	—	1.3~1.4	(1.4)
1.4	1.4~1.6	(1.5)	—	1.4~1.5	(1.4)
1.3	1.3~1.4	(1.3)	—	1.2~1.3	(1.3)
2.9	2.6~3.1	(2.8)	—	2.5~2.7	(2.6)
2.7	2.6~3.0	(2.8)	—	2.4~2.7	(2.6)
1.5	1.6~1.8	(1.7)	—	1.6~1.8	(1.7)
3.9	4.1~4.8	(4.4)	3.8	3.8~5.0	(4.4)
2.4	2.0~2.2	(2.1)	2.1	1.9~2.2	(2.1)
2.8	2.4~2.8	(2.6)	3.0	2.4~2.8	(2.6)
4.4	4.4~5.4	(5.0)	—	4.1~4.9	(4.5)
3.9	3.1~4.0	(3.5)	5.6	3.6~4.5	(4.1)
1.3	1.3~1.4	(1.4)	1.2	1.4~1.8	(1.6)
—	4.8 ⁸⁾		—	5.8~6.7	(6.2) ⁹⁾
6.2	4.8~6.0	(5.4) ⁸⁾	5.9	4.8~6.0	(5.3) ⁹⁾
3.4	3.2~3.7	(3.5)	5.5	3.1~4.0	(3.6) ⁹⁾
1.3	1.3~1.4	(1.3)	1.5	1.3~1.7	(1.4)
0.9	0.9~1.0	(1.0)	0.9	0.8~1.0	(0.9)
present	present		present	present	
absent	absent		absent	absent	

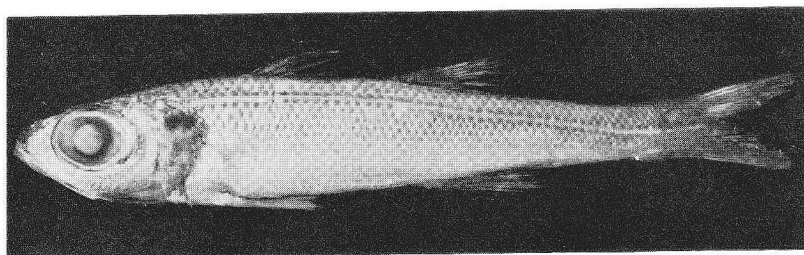


Fig. 1. Holotype of *Epigonus ctenolepis* sp. nov., FUMT-P 1567, 98 mm SL, collected off Owase, Japan.

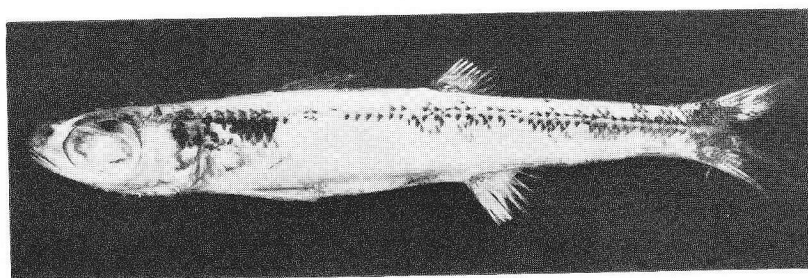


Fig. 2. *E. atherinoides* (Gilbert), FUMT-P 1574, 151 mm SL, collected on top of the Komahashi Seamount (ca. 28°06'N, 134°39'E) on the Kyushu-Palau Ridge.

Scales very deciduous except for those on lateral line. Pored scales on lateral line ctenoid. Scales near pelvic fin insertion cycloid. Skin not very deciduous.

Color in alcohol. Posterior part of skin under each scale dark brown on dorsal side with many densely distributed melanophores, paler on ventral side with fewer melanophores. Anterior part of snout and upper part of opercular region dark brown. Mouth whitish. Throat and branchial cavity blackish. A narrow dark blue-black line from insertion of pelvic fin to vent. Peritoneum black. Soft dorsal, anal and caudal fins dusky.

Remarks. Among the 4 species from Japan, *E. ctenolepis* most resembles *E. pectinifer* in having a compressed body, but is easily distinguished from it in having 10 dorsal soft rays (usually 9 in the latter), absence of the eighth rib (present in the latter) and 18~20 pectoral fin rays (15~17 in the latter) (Table 1; Fig. 3A, D).

E. ctenolepis shares with *E. atherinoides* many common characters such as soft ray counts of pectoral fin (18~20 in the former and 19~23 in the latter) and of the second dorsal fin (10 in both species), oval form of the eyes, absence of the eighth rib under tenth vertebra, presence of the pungent, fully-ossified opercular spine, etc.

However, *E. ctenolepis* is distinguished from *E. atherinoides* in having a compressed body (not compressed at the anterior part of the body in the latter), narrower body width (7.5~8.2 in SL in the former and 5.3~6.9 in the latter), 24~25 total gill rakers (19~23 in the latter), a longer spine of second dorsal fin (3.9~4.3 in head length in the former and 4.8~6.7 in the latter), increased number of scale rows below the lateral line (ca. 12~14 in the former, 8~9 in the latter).

Etymology. This species is named *ctenolepis* in reference to its ctenoid scales on the lateral line.

Epigonus atherinoides (Gilbert)

(Japanese name: Hira-yasemutsu)

(Fig. 2)

Hynnodus atherinoides Gilbert, 1905: 618, pl. 79 (original description, type locality: Pailolo Channel, Hawaii); Jordan and Jordan, 1922: 44; Fowler and Bean, 1930: 121 (in part).

Epigonus atherinoides: Tinker, 1978: 209~210; Mochizuki, 1982: 226 (color photograph), 227 and 377.

Hynnodus megalops Smith and Radcliffe in Radcliffe, 1912: 445, pl. 38, fig. 3 (original description, type locality: Albatross sta. 5388, 12°51'30"N, 123°26'15"E, Philippines).

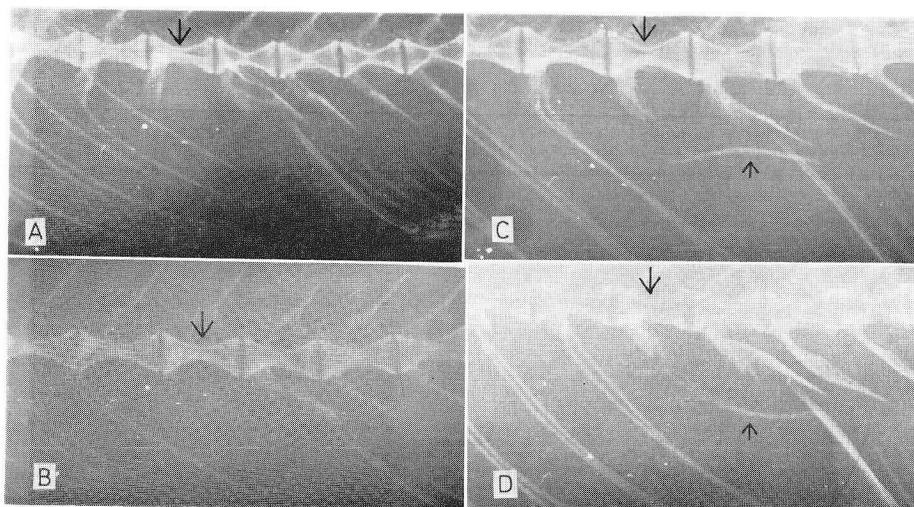


Fig. 3. X-ray photograph of 4 Japanese species of *Epigonus*. Eighth rib absent in A and B, and present in C and D. A, *E. ctenolepis* sp. nov. (holotype). B, *E. atherinoides* (FUMT-P1569). C, *E. denticulatus* (FUMT-P 1592). D, *E. pectinifer* (FUMT-P1578). Large arrow, tenth vertebra; small arrow, eighth rib.

Epigonus occidentalis: Mayer, 1974: 170~175 (in part).

? *Epigonus atherinoides*: Kamohara, 1938: 26, fig. 11; Kamohara, 1952: 37, fig. 31 (copied).

Material examined. FUMT-P 1569~1577, 9 specimens, 117~159 (mean 129) mm SL, captured on the top of the Komahashi Seamount (ca. 28°06'N, 134°39'E) on the Kyushu-Palau Ridge by bottom trawl at depths between 550~600 m on January 17, 1980, during a survey by the Japanese Fisheries Agency for resources on the continental slopes around Japan.

Diagnosis. This species is distinguished from all other species of *Epigonus* by the combination of the following characters: body depth less than or equal to body width at insertion of pectoral fin (body width 0.8~1.0 in body depth); body width 6.4~6.9 in SL; opercle with a pungent, fully-ossified spine; no eighth rib below tenth vertebra (Fig. 3B); soft rays of second dorsal fin 10; pectoral rays 19~23; total gill rakers 19~20; lateral-line scales 49~52 to caudal fin base; head length 2.7~3.3; upper jaw length 2.8~3.2 in head length; narrow and long caudal peduncle (the depth 4.0~4.7 in head length and the length 1.2~1.3 in head length); distance between right and left lateral lines measured at origin of dorsal fin base 1.1~1.4 in body width; distance between vent and anal fin origin 2.4~3.7 in distance between pelvic insertion and vent;

cycloid scales on lateral line.

Description. Counts, proportional measurements and two other selected characters are given in Table 1.

Body extremely elongate. Body depth less than or equal to body width at pectoral fin insertion. Middle and posterior parts of body cylindrical. Head flat above, except for a narrow concavity in interorbital region. Eye very large, oval. Maxillary reaching beyond anterior margin of eye. Supramaxillary absent. Opercle with a pungent, fully-ossified spine. Pseudobranchiae well developed. Distance between right and left lateral lines at origin of first dorsal fin base 1.1~1.4 (mean 1.2) in body width. Distance between vent and origin of anal fin base 2.4~3.7 (mean 2.9) in distance between pelvic fin insertion and vent.

Teeth on lateral side of both jaws small, in a single row; lower jaw with a patch of small teeth near symphysis. Vomer with small patch of small teeth. Palatines with small teeth in a single row. Tongue smooth.

Body scales very deciduous except for some lateral-line scales, which are cycloid. Skin easily removed except for near lateral line, near pectoral fin insertion and ventral side of caudal peduncle. Head without scales except for opercular, interorbital and occiput regions.

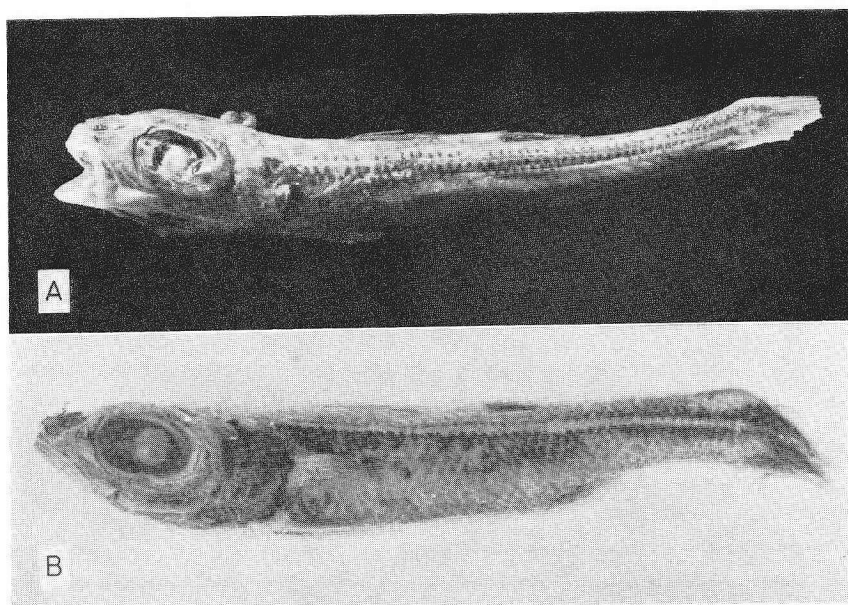


Fig. 4. A, holotype of *E. occidentalis* (Goode et Bean), MCZ 28032, 115 mm SL. Photograph from Museum of Comparative Zoology, Harvard University. B, *E. occidentalis*, one specimen of USNM 197353, 162 mm SL, collected from Caribbean Sea.

Dorsal spines slender, strongly compressed; the first very short; the third longest. Second dorsal and anal fins covered with small scales. Caudal fin covered with small scales to beyond mid-length.

Color in alcohol. Skin near lateral line and pectoral fin dark brown; that of ventral side of caudal peduncle paler. Opercular region with a blackish or dark brown spot. Tip of snout blackish brown. Branchial cavity dark brown. Mouth whitish. A narrow dark blue-black line from pelvic fin insertion to vent. Peritoneum black.

Remarks. Matsubara (1936) and Kamohara (1938) reported the fishes of *Epigonus* from Japan as *E. atherinoides*. However, Matsubara misidentified *E. denticulatus* as *E. atherinoides* as Mayer (1974) has indicated. Kamohara (1938) described his material as follows: "Body elongate; occiput depressed, broader than deep: ...: snout and opercles blackish: ...". This description agrees with the original description of *E. atherinoides* (Gilbert, 1905), and his figure (fig. 11) closely resembles Gilbert's original figure and the present specimens. However, some characters described by Kamohara (1938) do not agree with those of the holotype speci-

men and the present specimens, i.e. body depth, absence of teeth on both jaws, ctenoid scales on body, etc. Therefore, we cannot decide whether or not his identification was correct.

The present specimens agree well with the original description of *E. atherinoides* and with the holotype of the species (USNM 51601) which we re-examined.

Fowler and Bean (1930) synonymized *Hynnodus megalops* from the Philippines with *E. atherinoides*, and Mayer (1974) followed them. The holotype (USNM 70255) and the paratypes (USNM 147374 and 147375) of *H. megalops* show no specific difference from the type specimen of *E. atherinoides* and the present specimens from the Kyushu-Palau Ridge (Table 1).

Mayer (1974) considered that *E. atherinoides* was conspecific with *E. occidentalis* Goode and Bean which was recorded from the Atlantic, and that they were members of separate subspecies since he found some differences between them in some characters such as pyloric caeca and gill raker counts, shape of preopercular bone and fusion of uroneurals 1 and 2. He added that "formal description of the subspecies must await the capture of additional Pacific specimens." Mr. K. E. Hartel provided us with the

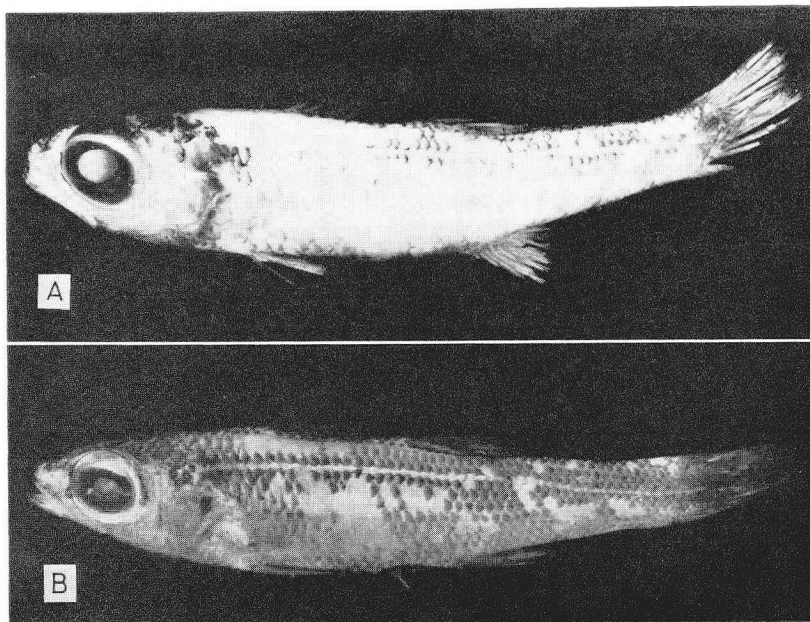


Fig. 5. A, *E. denticulatus* Dieuzeide, FUMT-P1606, 146 mm SL, collected off Owase, Japan. B, *E. pectinifer* Mayer, FUMT-P 1579, 93 mm SL, collected off Owase.

morphological data, the photograph and the radiograph of the holotype of *E. occidentalis* (MCZ 28032) (Fig. 4A), which were compared with those of the holotype of *E. atherinoides* and 9 specimens of *E. occidentalis* (USNM 197353 and 207705) (Fig. 4B) collected from the Caribbean Sea (Table 1). We have found that *E. atherinoides* differs from *E. occidentalis* in some characters; i.e., reduced number of gill rakers, shorter head length, shorter distance from snout to pectoral insertion and from snout to pelvic insertion (Table 1), distance between right and left lateral lines measured at origin of dorsal fin base in body width (1.1~1.4 (mean 1.2) in the former and 1.3~1.8 (mean 1.5) in the latter), distance between vent and anal fin origin in distance between pelvic insertion and vent (2.4~3.7 (mean 2.9) in the former, 1.8~2.4 (mean 2.1) in the latter), etc. These differences indicate that these two forms should represent separate species.

The number of vertebrae was 10+16 in the holotype of *E. occidentalis* while it was 10+15 in the 9 specimens examined. Differences in depth and length of the caudal peduncle were also found between the holotype and the other 9 specimens. However, these differences may be

considered as variation within the species.

Key to the Japanese species of *Epigonus*

- a₁: Operculum without a pungent, fully-ossified spine. Total gill rakers 27~31 on first gill arch ... *E. denticulatus* Dieuzeide (Fig. 5A)
(Japanese name: Hage-yasemutsu)
- a₂: Operculum with a pungent, fully-ossified spine. Total gill rakers 19~26 on first gill arch. b
- b₁: Eighth rib present below tenth vertebra. Dorsal soft rays usually 9. Pectoral rays 15~17. Total gill rakers 24~26.
..... *E. pectinifer* Mayer (Fig. 5B)
(Japanese name: Yasemutsu)
- b₂: Eighth rib absent. Dorsal soft rays 10. Pectoral rays 18~23. Total gill rakers 19~25. c
- c₁: Body width 5.3~6.9 in SL, 0.8~1.0 in body depth at insertion of pectoral fin. Transverse scales below lateral line 8~9. Total gill rakers 19~23. Length of spine of second dorsal fin 4.8~6.7 in head length. Scales on lateral line cycloid
..... *E. atherinoides* (Gilbert) (Fig. 2)
(Japanese name: Hira-yasemutsu)
- c₂: Body width 7.5~8.2 in SL, 1.3~1.4 in

body depth at insertion of pectoral fin. Transverse scales below lateral line ca. 12~14. Total gill rakers 24~25. Length of spine of second dorsal fin 3.9~4.3 in head length. Scales on lateral line ctenoid.

..... *E. ctenolepis* sp. nov. (Fig. 1)
(Japanese name: Naga-yasemutsu)

Comparative materials

E. atherinoides: USNM 51601, holotype of *Hynnodus atherinoides* Gilbert, 95 mm SL, from Hawaii; USNM 70255: holotype of *Hynnodus megalops* Smith et Radcliffe, 123 mm SL, from the Philippines (Albatross sta. 5388, 12°51'30"N, 123°26'15"E), 226 fms, on Mar. 11, 1909; USNM 147374, two paratypes of *H. megalops*, 108 and 114 mm SL, captured with the holotype; USNM 147375, paratype of *H. megalops*, 86 mm SL, from the Philippines (Albatross sta. 5508, 8°17'24"N, 124°11'42"E), 270 fms, on Aug. 5, 1909.

E. occidentalis: MCZ 28032, holotype, 162 mm SL, off Barbados, 237 fms; USNM 207705, 5 specimens, 75~116 mm SL, from Caribbean Sea (17°40'N, 77°55'W), 290 fms, on May 16, 1962; USNM 197353, 4 specimens, 143~173 mm SL, off Honduras, (14°10'N, 81°50'W), 300~330 fms, on May 21, 1962.

E. pectinifer: FUMT-P 1578, 93 mm SL, on Feb. 10, 1973; FUMT-P 1579, 92 mm SL; FUMT-P 1580~1583, 4 specimens, 51~67 mm SL, on April 22, 1979; FUMT-P 1584~1588, 5 specimens, 76~84 mm SL, on Mar. 21, 1979; FUMT-P 1589~1591, 3 specimens, 78~84 mm SL, on Mar. 21, 1979. All specimens listed above were collected off Owase, Japan, by bottom trawl. FAKU 1775 and 1777, 90 and 101 mm SL, off Owase, Japan, on Jan. 4~8, 1936, by Dr. Kiyomatsu Matsubara; FAKU 37378, 94 mm SL, off Totoro, Miyazaki Pref., Japan, on Nov. 10, 1965.

E. denticulatus: FUMT-P 1592, 129 mm SL, on Feb. 10, 1973; FUMT-P 1593, 118 mm SL; FUMT-P 1594~1596, 3 specimens, 54~89 mm SL, on Mar. 21, 1979; FUMT-P 1597~1602, 6 specimens, 92~131 mm SL, on Mar. 19, 1979; FUMT-P 1603~1605, 3 specimens, 69~79 mm SL, on Sept. 13, 1980. All specimens listed above were collected off Owase, Japan, by bottom trawl. FUMT-P 1606~1608, 3 specimens, 107~163 mm SL, collected on the top of the Komahashi Seamount (ca. 28°06'N, 134°39'E) in the Kyushu-Palau Ridge by bottom trawl

on Jan. 17, 1980; FUMT-P 1609, 191 mm SL, from Suruga Bay, 250 m, in April, 1973; FUMT-P 1610~1611, 2 specimens, 96 and 131 mm SL, from Suruga Bay.

Acknowledgments

We wish to thank Mr. Shojiro Fukui, Nachi-Katsuura-Cho, Wakayama Pref., Japan, for kindly providing us with the holotype specimen of *E. ctenolepis* and for his assistance in the senior author's field surveys. We also express our thanks to Mr. K. E. Hartel, Museum of Comparative Zoology, Harvard University, for sending us a photograph, a X-ray photograph and morphological data of the holotype of *E. occidentalis*, and to Dr. Stanley H. Weitzman, Dr. Robert Gibbs, Ms. Susan Jewett and their colleagues at U. S. National Museum of Natural History, for their kind assistance to the senior author when he visited the museum to examine the holotypes of *E. atherinoides* and *E. megalops* and specimens of *E. occidentalis*. We also thank Dr. Izumi Nakamura, Kyoto University, for lending the specimens of *E. pectinifer* collected by Dr. Kiyomatsu Matsubara. We are also grateful to Dr. Fumio Mitani, the Nansei Regional Fisheries Research Laboratory (Sanyo Hydrographic Survey Co., Ltd., at present) and his colleagues, for kind assistance on the survey by the Japanese Fisheries Agency when the specimens of *E. atherinoides* were captured, and to all crews of the bottom trawler, Shinei-maru No. 53, which was used on the project, for their help for collecting fish specimens.

Literature cited

- Fowler, H. W. and B. A. Bean. 1930. The fishes of the families Amiidae, Chandidae, Duleidae, and Serranidae, obtained by the United States Bureau of Fisheries Steamer "Albatross" in 1907 to 1910, chiefly in the Philippine Islands and adjacent sea. Bull. U. S. Nat. Mus., 100 (10): 1~334.
- Gilbert, C. H. 1905. The deep-sea fishes of the Hawaiian Islands. Aquatic Resources of the Hawaiian Islands. Sec. II. Bull. U. S. Fish. Comm., 23: 575~713, pls. 66~101.
- Jordan, D. S. and E. K. Jordan. 1922. A list of the fishes of Hawaii, with notes and descriptions of new species. Mem. Carnegie Mus., 10 (1): 1~92, pls. I~IV.
- Kamohara, T. 1938. On the offshore bottom-fishes of Prov. Tosa, Shikoku, Japan. Maruzen

- Co., Ltd., Tokyo, 86 pp.
- Kamohara, T. 1952. Revised descriptions of the offshore bottom fishes of Prov. Tosa, Shikoku, Japan. Rep. Kochi Univ., Nat. Sci., 3: 1~122.
- Matsubara, K. 1936. Biometry of two species of Japanese cardinal-fishes, with special reference to their taxonomy. J. Imp. Inst. Tokyo, 31: 119~130.
- Mayer, G. F. 1974. A revision of the cardinalfish genus *Epigonus* (Perciformes, Apogonidae), with descriptions of two new species. Bull. Mus. Comp. Zool., Harvard Univ., 146 (3): 147~203.
- Mochizuki, K. 1982. Apogonidae, pp. 226~227, 376~377. In Okamura, O., K. Amaoka and F. Mitani, eds., Fishes of the Kyushu-Palau Ridge and Tosa Bay. Jap. Fish. Resouce Conservation Ass., Tokyo, 435 pp.
- Radcliffe, L. 1912. Description of fifteen new species of the family Cheilodipteridae, from the Philippine Islands and contiguous waters. Proc. U. S. Nat. Mus., 41 (1868): 431~446, pls. 34~38.
- Tinker, S. W. 1978. Fishes of Hawaii. A handbook of the marine fishes of the Hawaii and the central Pacific Ocean. Hawaiian Service, Inc., Honolulu, xxxx+532+xxxvi pp.
- (KM: Department of Fisheries, University Museum,

University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo 113, Japan; KS: Shimonoseki University of Fisheries, Yoshimi-nagata-honmachi 1944, Shimonoseki, Yamaguchi Pref. 759-65, Japan.)

日本産ヤセムツ属魚類の1新種と1稀種

望月賢二・白木原国雄

尾鷲沖から得られた標本に基づき、新種 *Epigonus ctenolepis* ナガヤセムツを記載した。本種の形態的特徴は、体が側扁していること、主鰓蓋骨に強い一棘があること、8番目の肋骨がないこと、背鰭軟条数が10であること、側線鱗が櫛鱗であることなどであり、これらの組合わせにより、同属の他種と容易に区別される。さらに、*E. atherinoides* ヒラヤセムツが、九州・パラオ海嶺中の駒橋海山から得られた標本に基づき、記載された。本種はこれまでハワイとフィリピンより報告されているもので、その形態的特徴は、胸鰭基底部における体高は体幅より大きくないこと、側線鱗が円鱗であること、第2背鰭軟条数が10であること、第8番目の肋骨がないことなどである。

以上の結果に基づき、日本産の既知種 *E. pectinifer* ヤセムツと *E. denticulatus* ハゲヤセムツを加え、日本産本属魚類4種の検索表を作成した。

(望月: 113 東京都文京区本郷 7-3-1 東京大学総合研究資料館水産動物部門; 白木原: 759-65 山口県下関市吉見永田本町 1944, 水産大学校漁業学科)